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| 09/786,778 | 03/08/2001 | Francois Rey | 11343.030001 | 6588 |

22511 7590 08/21/2009
OSHA LIANG L.L.P.
TWO HOUSTON CENTER
909 FANNIN, SUITE 3500
HOUSTON, TX 77010

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| EXAMINER |
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RAMAN, USHA

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| ART UNIT | PAPER NUMBER |
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2424

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| NOTIFICATION DATE | DELIVERY MODE |
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08/21/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@oshaliang.com
buta@oshaliang.com

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|------------------------------|--------------------------------------|-----------------------------------|--|
| Office Action Summary | Application No. 09/786,778 | Applicant(s) REY ET AL. | |
| | Examiner USHA RAMAN | Art Unit 2424 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 July 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 48-64 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 48-64 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
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| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 20, 2009 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 48, 50, and 63 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 56-57, and 59-62 recite an apparatus comprising a single means that does not appear in combination with any other recited element of means and covers every conceivable transmitting apparatus, while the specification discloses a narrower

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scope known to the applicant. As such, the claim is subject to undue breadth and not enabling for other conceivable means not known to or disclosed by the applicant.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 48-49, 51-57, 59-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over DVB Document A038, "Specification for Service Information (SI) in Digital Video Broadcasting (DVB) Systems" published in March 1998 in view of Menand et al. (US Pat. 5,539,920).

With regards to claims 48 and 56, the DVB Specification discloses a method of transmission of application data in a plurality of services (see fig. 1) in a digital transport stream. In particular a service is identified as a sequence of programs, wherein the programs are a concatenation of one or more events. Accordingly each service (reading on claimed "service") carries at least one program (reading on claimed "application data"). See DVB SI Specification, pages 5-6. A BAT further provides information regarding a collection of services transmitted on a bouquet. See pages 5 and 8. The DVB Specification further incorporates in by reference ETR 211 "Digital Video Broadcasting (DVB): Guidelines on implementation and usage of

Service Information (SI)". The DVB Guidelines discloses that the BAT includes a service list descriptor (see page 19, 4.2.2.2.1), wherein the service list descriptor further identifies services by a service_id (same as program_number in most cases) and a service_type (see DVB SI specification page 54). Accordingly the BAT comprises information regarding at least one program (identified by service_id) carried by each of the plurality of services within the transport stream. The DVB specification further notes that a service comprise a plurality of different components including, audio video and data packets (see page 6, fig. 1). The DVB specification is silent on the at least one application being an executable interactive application configured to execute on a decoder.

In an analogous art, Menand discloses a broadcaster transmitting interactive application program with a television signal (col. 1 lines 14-18, lines 45-50), the interactive application configured to execute on a decoder (col. 1 lines 19-24).

It would have been obvious to one of ordinary skill in the art to modify the system in view of Menand by transmitting interactive program application executable on a receiver, thereby augmenting a television program with interactive component and enhancing user's experience. The modified system additionally includes information identifying interactive program application (i.e. service identifier) components in the service list descriptor, so that packets pertaining to interactive application can be extracted and subsequently executed.

With further regards to claim 56, the DVB SI specification further discloses that the data is transmitted over a physical medium from an emitting point. See

page 5. Accordingly the emitting point reads on the claimed “means for transmitting a transport stream”.

With regards to claims 49, and 57, the application data table (BAT) is transported in a transport packet having a predetermined packet ID value (0x0011) associated with the presence of an application data table within the packet. See page 11.

With regards to claims 51, and 59, the DVB SI specification further discloses a program map table (PMT) gives access to all applications carried by this service, the program map table itself comprising information (program_number, see page 54) regarding at least one application carried by this service. See page 8.

With regards to claims 52, and 60, the DVB Guideline notes that there maybe one or more bouquets (see page 12), wherein the BAT describes the services provided for bouquet identified by bouquet_id (see DVB SI Specification: page 16). Accordingly in the scenario where there are more than one bouquets, each bouquet identified by a bouquet_id has a BAT. This reads on the claimed, “plurality of application data tables, each application data table containing information regarding applications contained within a bouquet of services”.

With regards to claims 53, and 61, the DVB SI specification discloses that the BAT may be a table comprising a plurality of sub tables (see DVB SI specification pages 6, 15). The BAT therefore is associated with one of table and a section having one of a characteristic table ID and a characteristic table ID extension value (see DVB SI specification pages 6 and 10).

With regards to claim 54, the method further comprises receiving the application data in a digital television system (see DVB SI specification page 4).

With regards to claim 55, and, 62, the method further comprises wherein the digital transport stream conforms to the MPEG standard (see DVB SI specification page 6).

With regards to claim 63, the DVB Specification discloses a method of transmission of application data in a plurality of services (see fig. 1) in a digital transport stream. In particular a service is identified as a sequence of programs, wherein the programs are a concatenation of one or more events. Accordingly each service (reading on claimed “service”) carries at least one program (reading on claimed “application data”). See DVB SI Specification, pages 5-6. A BAT further provides information regarding a collection of services transmitted on a bouquet. See pages 5 and 8. The DVB Specification further incorporates in by reference ETR 211 “Digital Video Broadcasting (DVB): Guidelines on implementation and usage of Service Information (SI)”. The DVB Guidelines discloses that the BAT includes a service list descriptor (see page 19, 4.2.2.2.1), wherein the service list descriptor further identifies services by a service_id (same as program_number in most cases) and a service_type (see DVB SI specification page 54). Accordingly the BAT comprises information regarding at least one program (identified by service_id) carried by each of the plurality of services within the transport stream. The DVB specification further notes that a service comprise a plurality of different components including, audio video and data packets (see page 6, fig. 1). It is noted that when

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changing channels, data identified by program_number that is equivalent to the service_id is downloaded from the PMT. The DVB specification is silent on the at least one application being an executable interactive application configured to execute on a decoder. The DVB specification is further is silent on the step of deleting and maintaining the applications in dependence on the information contained within the application data.

In an analogous art, Menand discloses a broadcaster transmitting interactive application program with a television signal (col. 1 lines 14-18, lines 45-50), the interactive application configured to execute on a decoder (col. 1 lines 19-24). Menand further discloses the method of controlling, when changing between the plurality of services, the downloading, deleting, and maintenance of such applications based on dependencies. See col. 6, lines 20-24 and lines 36-64.

It would have been obvious to one of ordinary skill in the art to modify the system in view of Menand by transmitting interactive program application executable on a receiver, thereby augmenting a television program with interactive component and enhancing user's experience. The modified system additionally includes information identifying interactive program application (i.e. service identifier) components in the service list descriptor, so that packets pertaining to interactive application can be extracted and subsequently executed, wherein modules pertaining to interactive applications are downloaded, deleted and maintained in memory based on dependencies so that the necessary modules are present in

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memory for enabling execution of the interactive application and when they are no longer needed, memory is appropriately de-allocated.

6. Claims 50, 58, and 64, are rejected under 35 U.S.C. 103(a) as being unpatentable over DVB Document A038, "Specification for Service Information (SI) in Digital Video Broadcasting (DVB) Systems" published in March 1998 in view of Menand et al. (US Pat. 5,539,920) as applied to claims 48, 56, and 63, respectively, above and further in view of Akins (US Pat. 6,526,508).

With regards to claims 50, 58, and 64, the modified system does not disclose on the step of electronically signing the application data table so as to permit a decoder to verify an application data table as originating from a known operator.

Akins teaches the need for additional security measurements in downloading service related information to ensure that a received data is received from legitimate source. See column 5, lines 41-45 and lines 56-59.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the system in view of Akins' teachings to provide authentication means with the service information tables so that the receiver can authenticate the data prior to downloading it.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to USHA RAMAN whose telephone number is (571)272-7380. The examiner can normally be reached on Mon-Fri: 8am-4:30pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Kelley can be reached on (571) 272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christopher Kelley/
Supervisory Patent Examiner, Art
Unit 2424

/Usha Raman/